) Please Inter

Harshi Phan

ABSTRACT OF THE DISCLOSURE

In a three-dimensional recording and reproducing apparatus having a recording medium including a
plurality of recording layers stacked on a substrate and
an optical system for converging a light irradiated from
the substrate side on each of the plurality of recording
layers to three-dimensionally record and reproduce
information, the following equation is satisfied:

 $\lambda/4 \leq (1/8NB)(1/NB^2 - 1)NAF^4\Delta d$

where λ : Wavelength of the light;

NB : Refractivity of the substrate 3;

NAF: Numerical aperture of a focus lens 8 for converging a light;

Ad: Positional range in the optical axis direction in which exists a recording layer on which the light is to be converged.

HCP 6/02/07

A light spot is focused on each layer of the multi-layer structured disc to record and reproduce highly reliable data in a high density.